ECOLOGY AND THERMAL INACTIVATION OF MICROBES IN AND ON INTERPLANETARY SPACE VEHICLE COMPONENTS

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Inactivation of Microorganisms and Viral Particles

A Bibliography, 1960 to Mid-1975.

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ABSTRACT

As a support to current research, the Division of Microbiology has identified almost 600 articles and books published since 1960 about microbial and viral inactivation. This bibliography is presented to facilitate literature reviews on chemical, heat, and radiation inactivation of microorganisms and viral particles.

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The Division of Microbiology, Bureau of Foods, provides the research and consultation expertise for the Bureau of Foods on problems related to microbial contamination in foods. This division undertakes a wide variety of projects related to methods for detecting and identifying microorganisms and routinely examines techniques to control or eliminate microorganisms and viral agents. At least five current projects deal with methods to destroy different species of organisms and viral particles.

Since the modern basis of thermal parameters was first presented in 1920, many strains of microorganisms have been studied under varying conditions to determine the best way to inactivate them and a large body of published work about this subject has been presented to the scientific community. The modes of inactivation can be broadly classified as chemical, heat, radiation, or a mixture of the three; and the references in this bibliography have been similarly classified.

Because comparative data from recent investigations are necessary to design current studies, a large number of references were examined. Almost 600 papers have been identified as having some bearing on the general topic of inactivation of microorganisms and viral particles. The following periodicals (from 1960 to mid-1975) were used as the primary source for the references: Applied Microbiology, Bacteriology Reviews, Canadian Journal of Microbiology, Food Technology, Journal of Applied Bacteriology, Journal of Bacteriology, Journal of Dairy Science, Journal of Food Science, Journal of General Microbiology, Journal of Milk and Food Technology, Microbiology Abstracts, Poultry Science, Virology, and the NASA Bibliography of Scientific Publications and Presentations Relating to Planetary Quarantine. Pertinent articles from other periodical sources are included also, as are some books and review articles. The bibliography is not comprehensive; some references may have been overlooked or the source material may be incomplete.

The bibliography is presented as an aid to anyone needing information on the subject of microbial and viral inactivation.

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